



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,992	12/06/2001	Lawrence W. Stark	018158-018610US	1090

20350 7590 02/09/2007  
TOWNSEND AND TOWNSEND AND CREW, LLP  
TWO EMBARCADERO CENTER  
EIGHTH FLOOR  
SAN FRANCISCO, CA 94111-3834

EXAMINER

SHAY, DAVID M

ART UNIT PAPER NUMBER

3735

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
2 MONTHS	02/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**MAILED**  
**FEB 09 2007**  
**Technology Center 2600**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 1192007

Application Number: 10/006,992  
Filing Date: December 6, 2001  
Appellant(s): Stark, Lawrence

---

Nathan S. Cassell  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed October 27, 2006.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) *Status of Claims***

The statement of the status of claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

No amendments after final have been filed.

**(5) *Summary of Claimed Subject Matter***

The summary of claimed subject matter contained in the brief is correct.

**(6) *Grounds of Rejection to be Reviewed on Appeal***

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) *Claims Appendix***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) *Listing of Evidence Relied Upon***

The following is a listing of the prior art of evidence (e.g. patents, publications Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

Number (Title)	Name	Date
6,280,105	Odrich et al	August 28, 2001
6,486,943	Burns et al	November 26, 2002

**(9) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 18-20 and 36-42 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed invention is merely a calculation and thus falls within the realm of a mental process.

Claims 18-20 and 36-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Odrich et al in combination with Burns et al and Seibel et al. Odrich et al teach a method which includes mapping the surface contour of the cornea using a spatially resolved refractometer. Burns teach a spatially resolved refractometer, which transmits images through the cornea and receives images reflected off the retina. Seibel et al teach a method such as claimed except the transmission through optical tissue, reflection from the retina and a plurality of beamlets. It would have been obvious to employ the refractometer of Burns in the method of Odrich et al, since Odrich et al teaches no particular refractometer, and to produce the contour data by the close integration path method of Seibel et al, since neither Burns et al, nor Odrich et al discuss any method by which the contour data required for the method of Odrich et al can be produced, thus producing a method such as claimed.

**(10) *Response to Argument***

Appellant has chosen to argue the claims as a group. See the first sentence under section VII (A). Therefor, the examiner will limit his arguments to claim 18, for simplicity.

With regard to the rejection under 35 USC 101, appellant argues that it is improper to solely rely upon a "metal steps" test to support a rejection under 35 USC 101. Appellant further

submits that “the currently claimed method produces useful, concrete, and tangible results” and is thus statutory.

The examiner, while stating that the claims fall within the realm of a mental process, did not reach this conclusion by the “mental steps” test. As stated in the sentence asserting the claims to fall within the realm of a mental process, the examiner clearly stated that the claims merely describe a calculation. A calculation is non-statutory because it requires no physical transformation, and produces no useful, concrete, and tangible result. Nowhere in the four steps recited in claim 18 can a physical transformation or a tangible result be found. Thus the claim is non-statutory.

With regard to the art rejection, appellant first analyses each reference, coming to the conclusion that none are applicable under section 102 of the statute. Appellant then concludes, in part, that “instead of using the Odrich corneal surface refractometer, the artisan would allegedly be motivated to use the subsurface refractometer of Burns” in analyzing the examiner’s motivation statement. This is a curious conclusion because the examiner has never mentioned anything about a “surface refractometer” or a “subsurface refractometer” in fact these terms are also entirely absent from both the Odrich et al reference and the Burns et al reference. Neither uses either phrase. Thus it is unclear from whence appellant developed this line of reasoning. But be that as it may, the examiner’s reasoning is that since no particular refractometer of any kind is described (a refractometer is mentioned, only once at column 13, line 68 but no structure involved therein is described), the artisan of ordinary skill would look to teachings in the optical measurement arts, such as Burns et al to determine the required structure. However, Burns et al teach no method by which the corneal surface topography measurements (or any other tissue’s topography) may be produced, which is the purpose for which Odrich employs the refractometer.

Appellant makes mention of “optical tissue analysis methods described by Burns (e.g. col. 9, line 37 to col. 16, line 6)” but a careful reading of this portion of the Burns et al reference reveals that only the physical operation (i.e the turning on and off of various light sources, etc.) of the refractometer is described and no particular data processing steps are discussed anywhere in Burns et al. Thus actual data processing steps are not disclosed by either Burns et al or Odrich et al. This is a problem of image processing. Thus one of ordinary skill in the art would clearly look to the art of image processing to determine the steps by which the two dimensional images produced by the detector of Burns et al could be transformed so as to extract the height (or depth) information therefrom. Seibel et al provide these steps. Seibel et al determine the depth information by performing a surface integration along arbitrary curves along a closed path (see column 17, lines 16-36). As already set forth in the final rejection the originally filed disclosure teaches that the performing of the integration is the determination of the accuracy of the array: “An accuracy of at least one of the gradients of the gradient array may be determined by calculating a change in elevation along a closed integration path” (see the originally filed specification page 3, lines 18-20). Thus clearly all the claim elements are taught within the four corners of the applied references.

Appellant then alleges that the examiner has engaged in hindsight (presumably appellant is referring to impermissible hindsight). However, it should be clear from the foregoing that the examiner has merely followed a logical progression of providing the details absent from Odrich by locating teachings from analogous art that would reasonably be expected to provide the elements which are not described in detail in the base reference. Thus no “picking and choosing”; “prodigious imagination”; nor “mental gymnastics” are required, but simply the

looking to analogous arts to provide details otherwise unavailable, but which are required for the base reference to function properly.

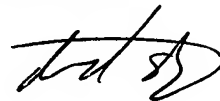
**(11) *Related Proceedings Appendix***

NONE

**(12) *Conclusion***

It is the examiner's firm opinion that the appealed claims are not patentable for the reasons argued above. Appellant has presented no convincing argument as to why the rejections set forth above are not obvious or proper. Therefore, it is respectfully submitted that the final rejection be affirmed

Respectfully submitted,



DAVID M. SHAY  
PRIMARY EXAMINER  
GROUP 330

David Shay  
January 21, 2007

Conferees  
Charles Marmor, II  
Greg Vidovich  
David Shay

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, California, 94111-3834